

ABSTRACT OF THE DISCLOSURE

In the disclosed optical signal processing device, the digital-to-analog conversion of the input optical signals is realized in an optical region, without converting the input optical signals into electric signals for the purpose of signal processing, by splitting input optical signals into plural sets, delaying the split optical signals for mutually different delay amounts while adjusting amplitudes of these optical signals, combining these optical signals, and gating these optical signals on a time axis. It is also possible to realize the processing of the optical signals that are multiplexed on a time axis such as interchanges of time-slots similarly.

15

20

25

30

35